

**Mumps V Protein Amino Acid Sequence**

MDQFIKQDETGDLIETGMNVANHFLSAPIQGTNSLSKASIIIPGVAPVLIGNPEQKNIQHPTA  
SHQGSKSKGSGSGVRSIIIVPPSEAGNGGTQIPEPLFAQTGQGGIVTTVYQDPTIQPTGSYRS  
VELAKIGKERMINRFVEKPRTSTPVTEFKRGAGSGCSRPDNPRGGHRREWSLSWVQGEVRVF  
EWCNPICSPITAAARFHSCKCGNCPAKCDQCERDYGPP

**FIG. 1**

**Mumps V DNA Sequence**

```
1   ATGGATCAAT TTATAAAACA GGATGAGACT GGTGATTAA TTGAGACAGG AATGAATGTT
61  GCAAATCATT TCCTATCCGC CCCCATTCAG GGAACCAACT CGCTGAGCAA GGCCTCAATC
121 ATCCCTGGCG TTGCACCTGT ACTCATTGGC AATCCAGAGC AAAAGAACAT TCAGCACCCCT
181 ACCGCATCAC ATCAGGGATC CAAGTCAAAG GGCAGcGGCT CAGGGGTCAG GTCCATCATA
241 GTCCCACCCT CCGAAGCAGG CAATGGAGGG ACTCAGATTC CTGAGCCCCT TTTTGCACAA
301 ACAGGACAGG GTGGTATAGT CACCACAGTT TATCAGGATC CAACTATCCA ACCAACAGGT
361 TCATACCGAA GTGTGGAATT GgCGAAGATC GGAAAAGAGA GAATGATTAA TCGATTTGTT
421 GAGAAACCTA GAAcCTCAAC GCCGGTGACA GAATTTAAGA GGGGGGCCGG GAGCGGCTGC
481 TCAAGGCCAG ACAATCCAAG AGGAGGGCAT AGACGGGAAT GGAGCCTCAG CTGGGTCCAA
541 GGAGAGGTCC GGGTCTTTGA GTGGTGCAAC CCTATATGCT CACCTATCAC TGCCGCAGCA
601 AGATTCCACT CCTGCAAATG TGGGAATTGC CCCGCAAAGT GCGATCAGTG CGAACGAGAT
661 TATGGACCTC CTTAG
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**FIG.\_2**

**Human STAT 3 Isoform-1 Amino Acid Sequence**

MAQWNQLQQLDTRYLEQLHQLYSDSFPMELRQFLAPWIESQDWAYAASKESHATLVFHNLLG  
EIDQQYSRFLQESNVLYQHNLRRIKQFLQSRYLEKPMEIARIVARCLWEESRLLQTAATAAQ  
QGGQANHPTAAVVTEKQQMLEQHLQDVRKRVQDLEQKMKVVENLQDDFDFNYKTLKSQGDMQ  
DLNGNNQSVTRQKMQQLEQMLTALDQMRRSIVSELAGLLSAMEYVQKTLTDEELADWKRRQQ  
IACIGGPPNICLDRLENWITSLAESQLQTRQQIKKLEELQQKVSYKGDPIVQHRPMLERIV  
ELFRNLMKSAFVVERQPCMPMHPDRPLVIKTGVQFTTKVRLLVKFPELNYQLKIKVCIDKDS  
GDVAALRGSRKFNILGTNTKVMNMEESNNGSLSAEFKHLTLREQRCGNGGRANCDASLIVTE  
ELHLITFETEVYHQGLKIDLETHSLPVVVISNICQMPNAWASILWYNMLTNNPKNVNFFTKP  
PIGTWDQVAEVLWSWQFSSTTKRGLSIEQLTTLAEKLLGPGVNYSGCQITWAKFCKENMAGKG  
FSFWVWLDNIIDLVKKYILALWNEGYIMGFISKERERAILSTKPPGTFLRFSESSKEGGVT  
FTWVEKDISGKTQIQSVEPYTKQQLNMSFAEIIMGYKIMDATNILVSPLVYLYPDIPKEEA  
FGKYCRPESQEHPEADPGSAAPYLKTKFICVTPTTCSNTIDLPMSPRTLDSLMOFGNNGEGA  
EPSAGGQFESLTFDMELTSECATSPM

**FIG.\_3**

## Human Stat 3 Nucleotide Sequence

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1      GGT1TTCCGGA GCTGCGGCGG CGCAGACTGG GAGGGGGAGC CGGGGGTTCC GACGTGCGAG
61     CCGAGGGAAAC AAGCCCCAAC CGGATCCTGG ACAGGCACCC CGGCTTGGCG CTGTCTCTCC
121    CCTCGGCTC GGAGAGGCCC TTCGGCCTGA GGGAGCCTCG CCGCCCGTCC CCGGCACACG
181    CGCAGCCCCG GCCTCTCGGC CTCTGCCGGA GAAACAGTTG GGACCCCTGA TTTTAGCAGG
241    ATGGCCCAAT GGAATCAGCT ACAGCAGCTT GACACACGGT ACCTGGAGCA GCTCCATCAG
301    CTCTACAGTG ACAGCTTCCC AATGGAGCTG CGGCAGTTTC TGGCCCCCTG GATTGAGAGT
361    CAAGATTGGG CATATGCGGC CAGCAAAGAA TCACATGCCA CTTTGGTGTG TCATAATCTC
421    CTGGGAGAGA TTGACCAGCA GTATAGCCGC TTCCTGCAAG AGTCGAATGT TCTCTATCAG
481    CACAATCTAC GAAGAATCAA GCAGTTTCTT CAGAGCAGGT ATCTTGAGAA GCCAATGGAG
541    ATTGCCCCGA TTGTGGCCCC GTGCCTGTGG GAAGAATCAC GCCTTCTACA GACTGCAGCC
601    ACTGCGGCCC AGCAAGGGGG CCAGGCCAAC CACCCACAG CAGCCGTGGT GACGGAGAAG
661    CAGCAGATGC TGGAGCAGCA CCTTCAGGAT GTCCGGAAGA GAGTGCAGGA TCTAGAACAG
721    AAAATGAAAG TGGTAGAGAA TCTCCAGGAT GACTTTGATT TCAACTATAA AACCCTCAAG
781    AGTCAAGGAG ACATGCAAGA TCTGAATGGA AACAACCAGT CAGTGACCAG GCAGAAGATG
841    CAGCAGCTGG AACAGATGCT CACTGCGCTG GACCAGATGC GGAGAAGCAT CGTGAGTGAG
901    CTGGCGGGGC TTTGTTCAGC GATGGAGTAC GTGCAGAAAA CTCTCACGGA CGAGGAGCTG
961    GCTGACTGGA AGAGGCGGCA ACAGATTGCC TGCATTGGAG GCCCGCCCAA CATCTGCCTA
1021   GATCGGCTAG AAAACTGGAT AACGTCAATTA GCAGAATCTC AACTTCAGAC CCGTCAACAA
1081   ATTAAGAAAC TGGAGGAGTT GCAGCAAAAA GTTTCCTACA AAGGGGACCC CATTGTACAG
1141   CACCGGCCGA TGCTGGAGGA GAGAATCGTG GAGCTGTTTA GAAACTTAAT GAAAAGTGCC
1201   TTTGTGGTGG AGCGGCAGCC CTGCATGCCC ATGCATCCTG ACCGGCCCCCT CGTCATCAAG
1261   ACCGGCGTCC AGTTCACTAC TAAAGTCAGG TTGCTGGTCA AATTCCCTGA GTTGAATTAT
1321   CAGCTTAAAA TTAAAGTGTG CATTGACAAA GACTCTGGGG ACGTTGCAGC TCTCAGAGGA
1381   TCCCGGAAAT TTAACATTCT GGGCACAAAC ACAAAGTGA TGAACATGGA AGAATCCAAC
1441   AACGGCAGCC TCTCTGAGA ATTCAAACAC TTGACCCTGA GGGAGCAGAG ATGTGGGAAT
1501   GGGGGCCGAG CCAATTGTGA TGCTTCCCTG ATTGTGACTG AGGAGCTGCA CCTGATCACC
1561   TTTGAGACCG AGGTGTATCA CCAAGGCCCTC AAGATTGACC TAGAGACCCA CTCCTTGCCA
1621   GTTGTGGTGA TCTCCAACAT CTGTCAGATG CCAAATGCCT GGGCGTCCAT CCTGTGGTAC
1681   AACATGCTGA CCAACAATCC CAAGAATGTA AACTTTTTTA CCAAGCCCCC AATGGGAACC
1741   TGGGATCAAG TGGCCGAGGT CCTGAGCTGG CAGTTCTCCT CCACCACCAA GCGAGGACTG
1801   AGCATCGAGC AGCTGACTAC ACTGGCAGAG AAACCTTTGG GACCTGGTGT GAATTATTCA
1861   GGGTGTGAGA TCACATGGGC TAAATTTTGC AAAGAAAACA TGGCTGGCAA GGGCTTCTCC
1921   TTCTGGGTCT GGCTGGACAA TATCATTGAC CTTGTGAAAA AGTACATCCT GGCCCTTTGG
1981   AACGAAGGGT ACATCATGGG CTTTATCAGT AAGGAGCGGG AGCGGGCCAT CTGAGCACT
2041   AAGCCTCCAG GCACCTTCTT GCTAAGATTC AGTGAAAGCA GCAAAGAAGG AGGCGTCACT
2101   TTCATTGGG TGGAGAAGGA CATCAGCGGT AAGACCCAGA TCCAGTCCGT GGAACCATAC
2161   ACAAAGCAGC AGCTGAACAA CATGTCATTT GCTGAAATCA TCATGGGCTA TAAGATCATG
2221   GATGCTACCA ATATCCTGGT GTCTCCACTG GTCTATCTCT ATCCTGACAT TCCCAAGGAG
2281   GAGGCATTCT GAAAGTATTG TCGGCCAGAG AGCCAGGAGC ATCCTGAAGC TGACCCAGGT
2341   AGCGCTGCCC CATACTGAA GACCAAGTTT ATCTGTGTGA CACCAACGAC CTGCAGCAAT
2401   ACCATTGACC TGCCGATGTC CCCCCGCACT TTAGATTTCAT TGATGCAGTT TGGAAATAAT
2461   GGTGAAGGTG CTGAACCCTC AGCAGGAGGG CAGTTTGAGT CCCTCACCTT TGACATGGAG
2521   TTGACCTCGG AGTGCGCTAC CTCCCCCATG TGAGGAGCTG AGAACGGAAG CTGCAGAAAG
2581   ATACGACTGA GGCGCCTACC TGCATTCTGC CACCCCTCAC ACAGCCAAAC CCCAGATCAT
2641   CTGAAACTAC TAACTTTGTG GTTCCAGATT TTTTATTAACT TCCTACTTCT GCTATCTTTG
2701   AGCAATCTGG GCACTTTTAA AAATAGAGAA ATGAGTGAAT GTGGGTGATC TGCTTTTATC
2761   TAAATGCAAA TAAGGATGTG TTCTCTGAGA CCCATGATCA GGGGATGTGG CGGGGGGTGG
2821   CTAGAGGGAG AAAAAGGAAA TGTCTTGTGT TGTTTTGTTC CCCTGCCCTC CTTTCTCAGC
2881   AGCTTTTTGT TATTGTTGTT GTTGTCTTGA GACAAGTGCC TCCTGGTGCC TGCGGCATCC
2941   TTCTGCCTGT TTCTGTAAGC AAATGCCACA GGCCACCTAT AGCTACATAC TCCTGGCATT
3001   GCACTTTTTA ACCTTGCTGA CATCCAAATA GAAGATAGGA CTATCTAAGC CCTAGGTTTC

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FIG. 4A

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3061 TTTTAAATT AAGAAATAAT AACAATTAAA GGGCAAAAAA CACTGTATCA GCATAGCCTT
3121 TCTGTATTTA AGAAACTTAA GCAGCCGGGC ATGGTGGCTC ACGCCTGTAA TCCCAGCACT
3181 TTGGGAGGCC GAGGCGGATC ATAAGGTCAG GAGATCAAGA CCATCCTGGC TAACACGGTG
3241 AAACCCCGTC TCTACTAAAA GTACAAAAAA TTAGCTGGGT GTGGTGGTGG GCGCCTGTAG
3301 TCCCAGCTAC TCGGGAGGCT GAGGCAGGAG AATCGCTTGA ACCTGAGAGG CGGAGGTTGC
3361 AGTGAGCCAA AATTGCACCA CTGCACACTG CACTCCATCC TGGGCGACAG TCTGAGACTC
3421 TGTCTCAAAA AAAAAAAAAA AAAAAAAAAA AAAAA
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**FIG. 4B**

**Human STAT 1 Isoform- $\alpha$  Amino Acid Sequence**

MSQWYELQQLDSEKFLEQVHQLYDDSFPMIEIRQYLAQWLEKQDWEHAANDVSFATIRFHDLLS  
QLDDQYSRFSLENNFLLQHNIRKSKRNLDNFQEDPIQMSMI IYSCLEERKILENAQRFNQ  
AQSGNIQSTVMLDKQKELDSKVRNVKDKVMCI EHEIKSLEDLQDEYDFKCKTLQNREHETNG  
VAKSDQKQEQLLLKKMYLMLDNKRKEVVHKI IELLNVTELTQNALINDELVEWKRRQQSACI  
GGPPNACLDQLQNWFTIVAESLQQVRQQLKKLEELEQKYTYEHDPI TKNKQVLWDRTFSLFQ  
QLIQSSFVVERQPCMPHTHPQRPLVLKTGVQFTVKLRLLVKLQELNYNLKVKVLFDKDVNERN  
TVKGFRKFNILGTHTKVMNMEESTNGSLAAEFRHLQLKEQKNAGTRTNEGPLIVTEELHSL  
FETQLCQPGLVIDLETTSLPVVVISNVSQLPSGWASILWYNMLVAEPRNLSFFLTTPPCARWA  
QLSEVLSWQFSSVTKRGLNVDQLNMLGEKLLGPNASPDGLIPWTRFCKENINDKNFPFWLWI  
ESILELIKHLPLWNDGCIMGFISKERERALLKDQQPGTFLLRFSESSREGAITFTWVERS  
QNGGEPDFHAVEPYTKKELSAVTFPDIIRNYKVMAAENIPENPLKYLYPNIDKDHAFGKYYS  
RPKEAPEPEMELDGPKGTGYIKTELISVSEVHPSRLQTTDNLLPMSPEEFDEVSRIVGSVEFD  
SMMNTV

**FIG. 5**

## Human Stat 1 Nucleotide Sequence

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1   AGCGGGGCGG GGCGCCAGCG CTGCCTTTTC TCCTGCCGGG TAGTTTCGCT TTCCTGCGCA
61  GAGTCTGCGG AGGGGCTCGG CTGCACCGGG GGGATCGCGC CTGGCAGACC CCAGACCGAG
121 CAGAGGCGAC CCAGCGCGCT CGGGAGAGGC TGCACCGCCG CGCCCCCGCC TAGCCCTTCC
181 GGATCCTGCG CGCAGAAAAG TTTCAATTGC TGTATGCCAT CCTCGAGAGC TGTCTAGGTT
241 AACGTTGCGA CTCTGTGTAT ATAACCTCGA CAGTCTTGGC ACCTAACGTG CTGTGCGTAG
301 CTGCTCCTTT GGTGAATCC CCAGGCCCTT GTTGGGGCAC AAGGTGGCAG GATGTCTCAG
361 TGGTACGAAC TTCAGCAGCT TGACTCAAAA TTCCTGGAGC AGGTTACCA GCTTTATGAT
421 GACAGTTTTC CCAATGATGT CAGACAGTAC CTGGCACAGT GGTTAGAAAA GCAAGACTGG
481 GAGCAGCTG CCAATGATGT TTTCTTTGCG ACCATCCGTT TTCATGACCT CCTGTACAG
541 CTGGATGATC AATATAGTCG CTTTCTTTTG GAGAATAACT TCTTGCTACA GCATAACATA
601 AGGAAAAGCA AGCGTAATCT TCAGGATAAT TTTGAGGAG ACCCAATCCA GATGTCTATG
661 ATCATTTACA GCTGTCTGAA GGAAGAAAGG AAAATTCTGG AAAACGCCCA GAGATTTAAT
721 CAGGCTCAGT CGGGGAATAT TCAGAGCACA GTGATGTTAG ACAAACAGAA AGAGCTTGAC
781 AGTAAAGTCA GAAATGTGAA GGACAAGGTT ATGTGTATAG AGCATGAAAT CAAGAGCCTG
841 GAAGATTTAC AAGATGAATA TGACTTCAAA TGCAAAACCT TGCAGAACAG AGAACACGAG
901 ACCAATGGTG TGGCAAAGAG TGATCAGAAA CAAGAACAGC TGTTACTCAA GAAGATGTAT
961 TTAATGCTTG ACAATAAGAG AAAGGAAGTA GTTCACAAAA TAATAGAGTT GCTGAATGTC
1021 ACTGAACCTTA CCCAGAAATGC CCTGATTAAT GATGAACTAG TGGAGTGGAA GCGGAGACAG
1081 CAGAGCGCCT GTATTGGGGG GCCGCCCAAT GCTTGCTTGG ATCAGCTGCA GAACTGGTTC
1141 ACTATAGTTG CGGAGAGTCT GCAGCAAGTT CGGCAGCAGC TTAAGAGTT GGAGGAATTG
1201 GAACAGAAAT ACACCTACGA ACATGACCTT ATCACAAGAA ACAAACAAGT GTTATGGGAC
1261 CGCACCTTCA GTCTTTTCCA GCAGCTCATT CAGAGCTCGT TTGTGGTGGA AAGACAGCCC
1321 TGCATGCCAA CGCACCTTCA GAGGCCGCTG GTCTTGAAGA CAGGGGTCCA GTTCACTGTG
1381 AAGTTGAGAC TGTGTTGAA ATTGCAAGAG CTGAATTATA ATTTGAAAGT CAAAGTCTTA
1441 TTTGATAAAG ATGTGAATGA GAGAAATACA GTAAAAGGAT TTAGGAAGTT CAACATTTTG
1501 GGCACGCACA CAAAAGTGAT GAACATGGAG GAGTCCACCA ATGGCAGTCT GGCGGCTGAA
1561 TTTCCGCACC TGCAATTGAA AGAACAGAAA AATGCTGGCA CCAGAACGAA TGAGGGTCCT
1621 CTCATCGTTA CTGAAGAGCT TCACTCCCTT AGTTTGAAG CCCTATTGTG CCAGCCTGGT
1681 TTGGTAATTG ACCTCGAGAC GACCTCTCTG CCCGTTGTGG TGATCTCAA CGTCAGCCAG
1741 CTCCCGAGCG GTTGGGCCTC CATCCTTTGG TACAACATGC TGGTGGCGGA ACCCAGGAAT
1801 CTGTCTTCT TCCTGACTCC ACCATGTGCA CGATGGGCTC AGCTTTCAGA AGTGTCTGAG
1861 TGGCAGTTT CTTCTGTAC CAAAAGAGGT CTCAATGTGG ACCAGCTGAA CATGTTGGGA
1921 GAGAAGCTT TTGGTCTTAA CGCCAGCCCC GATGGTCTCA TTCCGTGGAC GAGGTTTTGT
1981 AAGGAAAATA TAAATGATA AAATTTTCCC TTCTGGCTTT GGATTGAAAG CATCCTAGAA
2041 CTCATTAAAA AACACCTGCT CCTCTCTGG AATGATGGGT GCATCATGGG CTTATCAGC
2101 AAGGAGCGAG AGCGTGCCCT GTTGAAGGAC CAGCAGCCGG GGACCTTCCT GCTGCGGTTT
2161 AGTGAGAGCT CCCGGGAAGG GGCCATCACA TTCACATGGG TGGAGCGGTC CCAGAACGGA
2221 GGCGAACCTG ACTTCCATGC GGTGTAACCC TACACGAAGA AAGAACTTTC TGCTGTTACT
2281 TTCCCTGACA TCATTGCAA TTACAAAGTC ATGGCTGCTG AGAATATTCC TGAGAATCCC
2341 CTGAAGTATC TGTATCCAAA TATTGACAAA GACCATGCCT TTGGAAAGTA TTTACTCCAG
2401 CCAAAGGAAG CACCAGAGCC AATGGAACCT GATGGCCCTA AAGGAACTGG ATATATCAAG
2461 ACTGAGTTGA TTTCTGTGTC TGAAGTTCAC CCTTCTAGAC TTCAGACCAC AGACAACCTG
2521 CTCCCATGT CTCCTGAGGA GTTTGACGAG GTGTCTCGGA TAGTGGGCTC TGTAGAATTC
2581 GACAGTATGA TGAACACAGT ATAGAGCATG AATTTTCTTC ATCTTCTCTG GCGACAGTTT
2641 TCCTTCTCAT CTGTGATTCC CTCCTGCTAC TCTGTTCCCT CACATCCTGT GTTTCTAGGG
2701 AAATGAAAGA AAGGCCAGCA AATTGCTGAC AACCTGTTGA TAGCAAGTGA ATTTTCTCT
2761 AACTCAGAAA CATCAGTTAC TCTGAAGGGC ATCATGCATC TTACTGAAGG TAAAATTGAA
2821 AGGCATTCTC TGAAGAGTGG GTTTCACAAG TGAAAAACAT CCAGATACAC CCAAAGTATC
2881 AGGACGAGAA TGAGGGTCCT TTGGGAAAGG AGAAGTTAAG CAACATCTAG CAATGTTAT
2941 GCATAAAGTC AGTGCCCAAC TGTTATAGGT TGTTGGATAA ATCAGTGGTT ATTTAGGGAA
3001 CTGCTTGACG TAGGAACGGT AAATTTCTGT GGGAGAATTC TTACATGTTT TCTTTGCTTT
3061 AAGTGTAAC GGCAGTTTTC CATTGGTTTA CCTGTGAAAT AGTTCAAAGC CAAGTTTATA
3121 TACAATTATA TCAGTCTCTT TTCAAAGGTA GCCATCATGG ATCTGGTAGG GGGAAAATGT
3181 GTATTTTATT ACATCTTTCA CATTGGCTAT TTAAAGACAA AGACAAATTC TGTTTCTTGA
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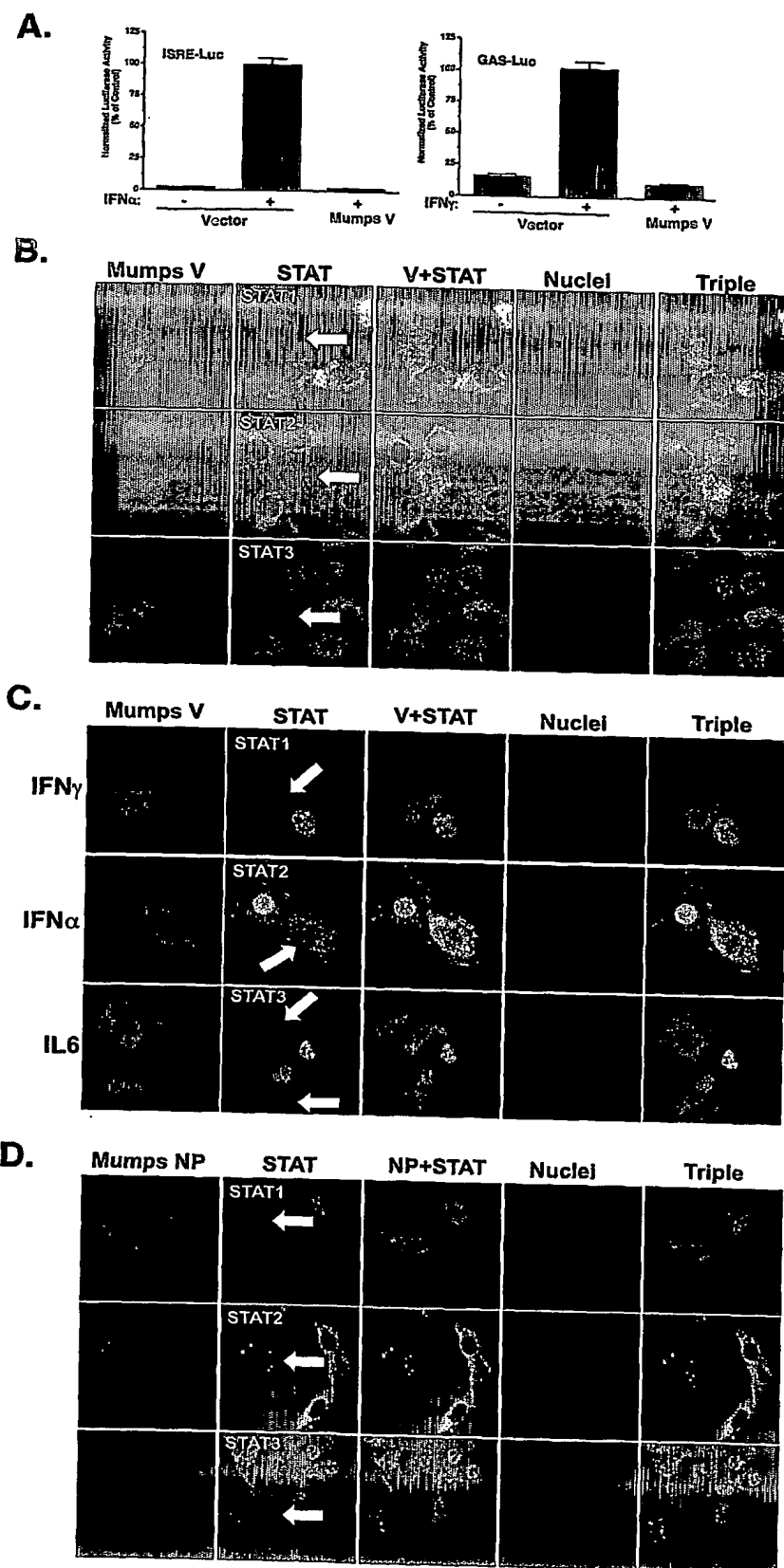
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FIG. 6A

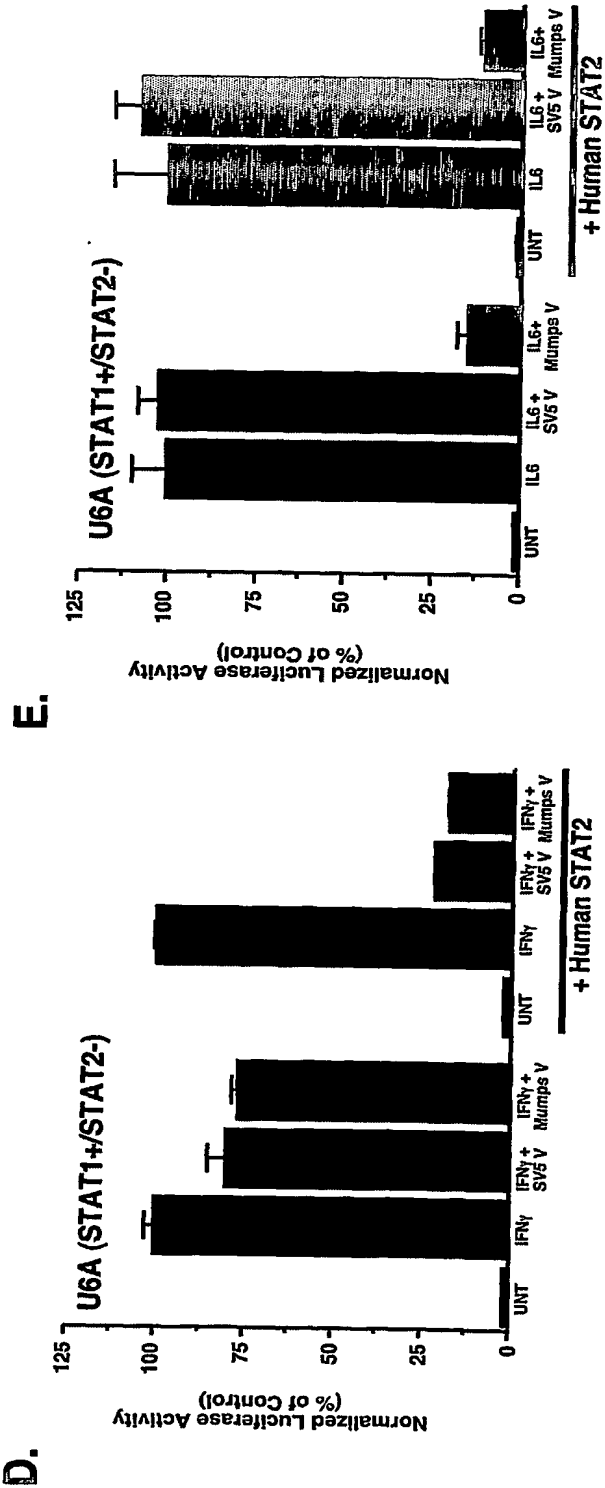
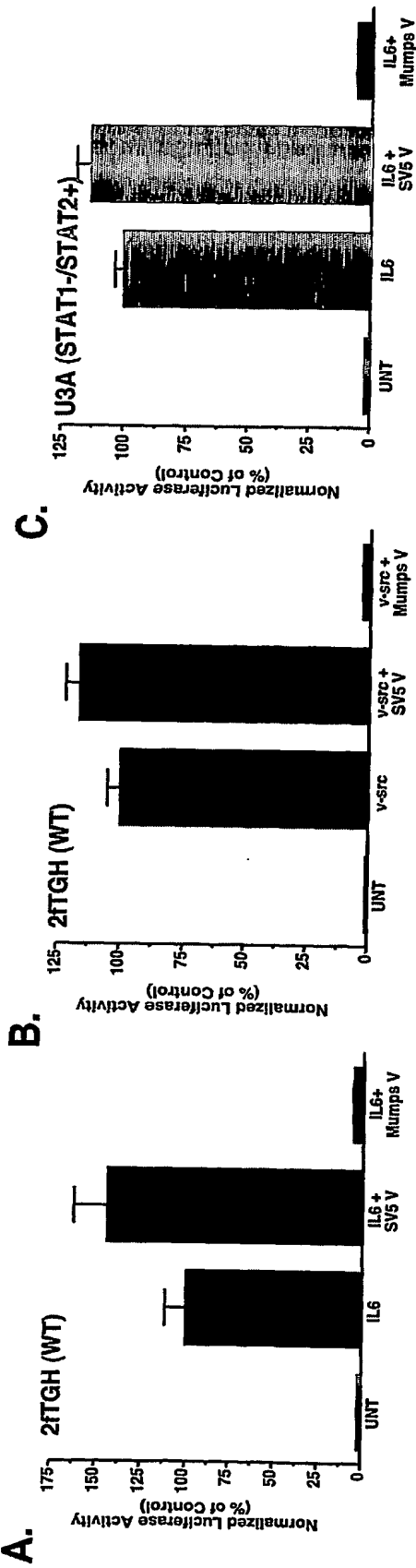
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3301 AGGATGTACA TTTCCAAATT CACAAGTTGT GTTTGATATC CAAAGCTGAA TACATTCTGC
3361 TTTTCATCTTG GTCACATACA ATTATTTTTTA CAGTTCTCCC AAGGGAGTTA GGCTATTCAC
3421 AACCACATCAT TCAAAAGTTG AAATTAACCA TAGATGTAGA TAAACTCAGA AATTTAATTC
3481 ATGTTTCTTA AATGGGCTAC TTTGTCCTTT TTGTTATTAG GGTGGTATTT AGTCTATTAG
3541 CCACAAAATT GGGAAAAGGAG TAGAAAAAGC AGTAACTGAC AACTTGAATA ATACACCAGA
3601 GATAATATGA GAATCAGATC ATTTCAAAC TCATTTCCCTA TGTAACGCA TTGAGAACTG
3661 CATATGTTTC GCTGATATAT GTGTTTTTCA CATTTGCGAA TGGTTCCATT CTCTCTCCTG
3721 TACTTTTTCC AGACACTTTT TTGAGTGGAT GATGTTTCGT GAAGTATACT GTATTTTTAC
3781 CTTTTTCCTT CCTTATCACT GACACAAAAA GTAGATTAAG AGATGGGTTT GACAAGGTTT
3841 TTCCCTTTTA CATACTGCTG TCTATGTGGC TGTATCTTGT TTTTCCACTA CTGCTACCAC
3901 AACTATATTA TCATGCAAAAT GCTGTATTCT TCTTTGGTGG AGATAAAGAT TTCTTGAGTT
3961 TTGTTTTTAAA ATTAAGCTA AAGTATCTGT ATTGCATTAA ATATAATATG CACACAGTGC
4021 TTTCCGTGGC ACTGCATACA ATCTGAGGCC TCCTCTCTCA GTTTTTATAT AGATGGCGAG
4081 AACCTAAGTT TCAGTTGATT TTACAATTGA AATGACTAAA AAACAAAGAA GACAACATTA
4141 AAACAATATT GTTTCTA
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**FIG. 6B**





FIGS. 7A-7D



FIGS. 8A-8E

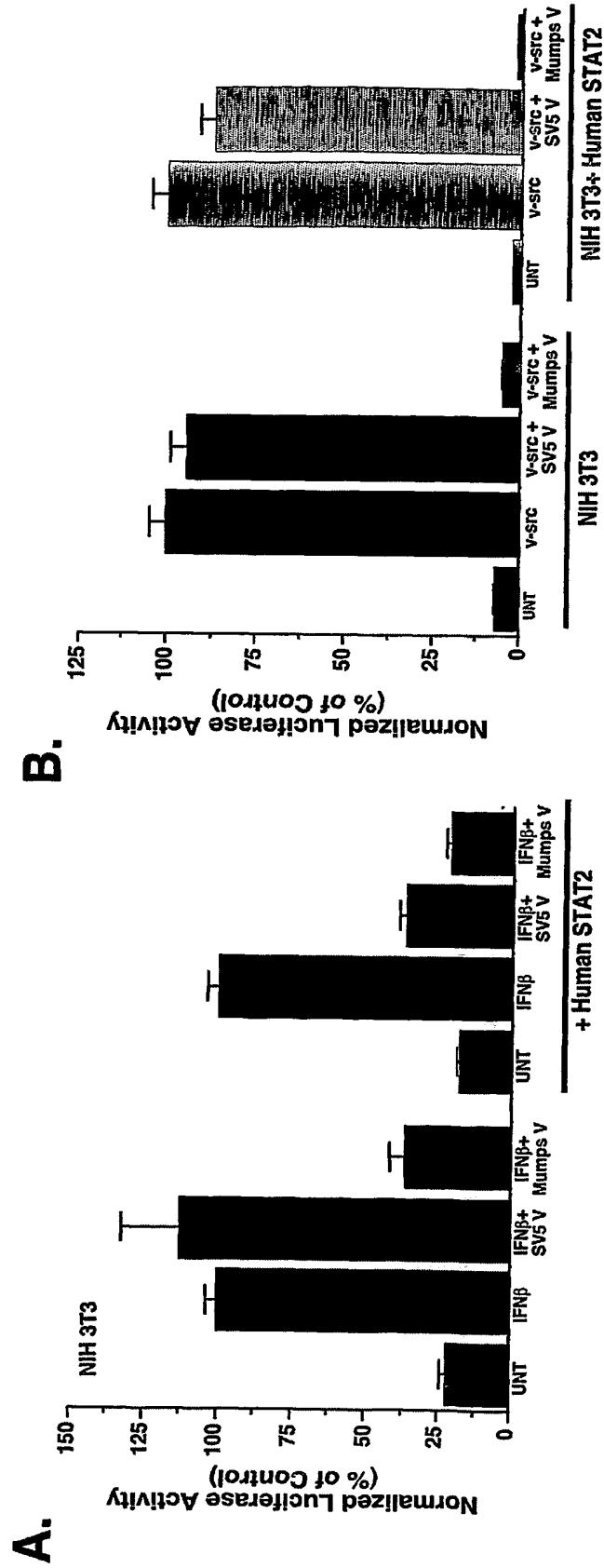
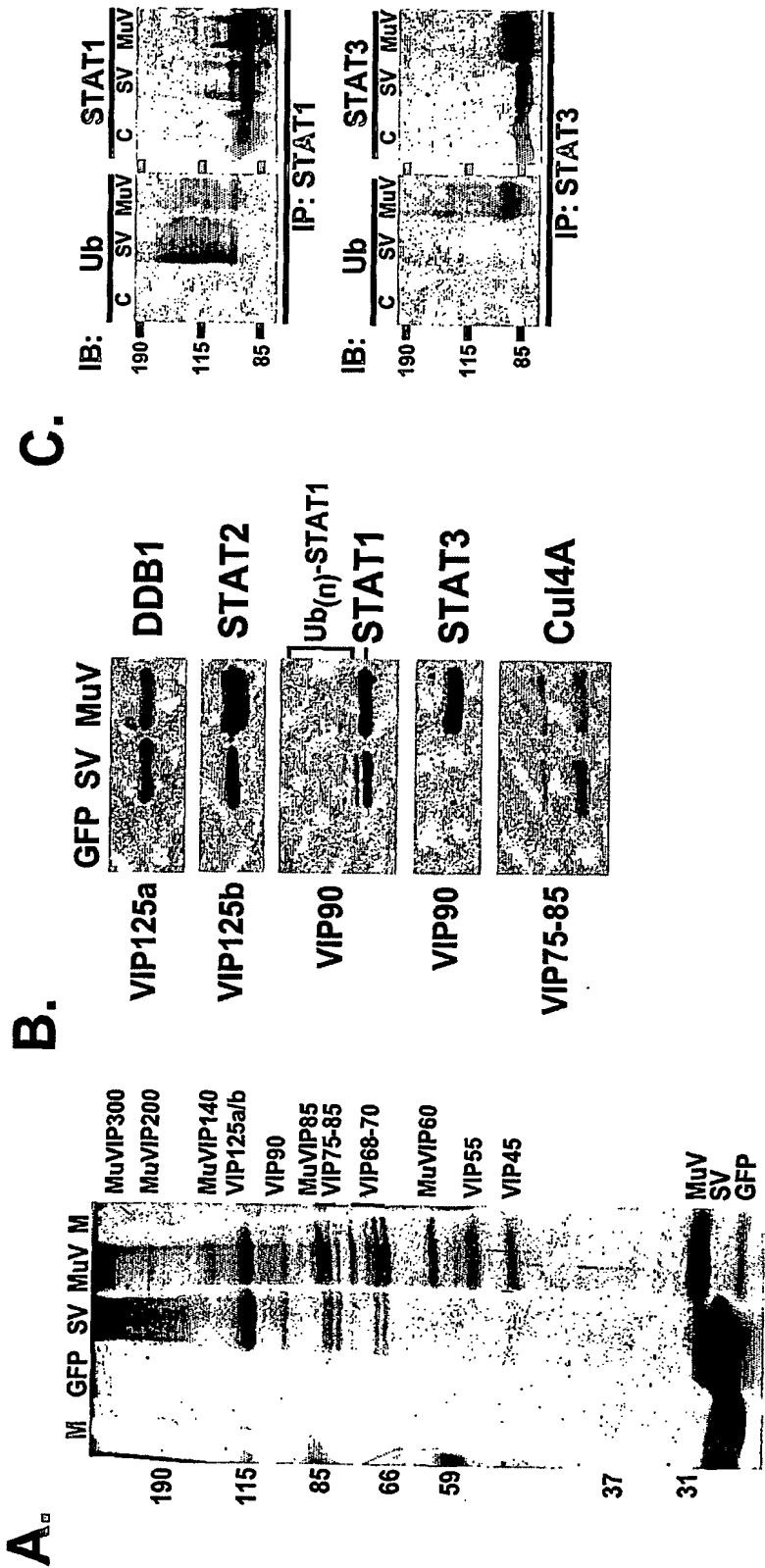
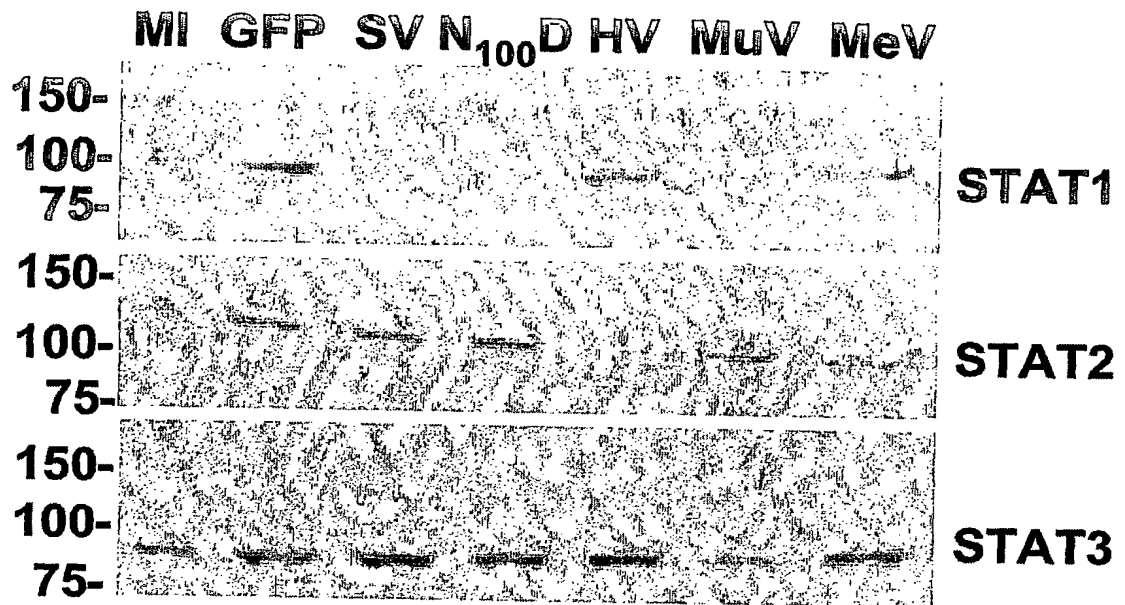


FIG. 9A

FIG. 9B



FIGS.\_10A-10C

**FIG.\_11**